

REMARKS

The office action of May 9, 2008, has been carefully considered.

It is noted that claims 1, 2, 5 and 7 are rejected under 35 U.S.C. 112, second paragraph.

Claims 1, 2, 5 and 7 are rejected under 35 U.S.C. 102(b) or, in the alternative, under 35 U.S.C. 103(a) over the patent to Carlblom.

In view of the Examiner's rejections of the claims, applicant has amended claims 1 and 7.

It is respectfully submitted that the claims now on file particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has amended the claims to address the instances of indefiniteness pointed out by the Examiner.

In view of these considerations it is respectfully submitted that the rejection of claims 1, 2, 5 and 7 under 35 U.S.C. 112,

second paragraph is overcome and should be withdrawn.

It is respectfully submitted that the claims presently on file differ essentially and in an unobvious, highly advantageous manner from the constructions disclosed in the references.

Turning now to the references and particularly to the patent to Carlblom, it can be seen that this patent discloses epoxy-amine barrier coatings with aryloxy or aryloate groups. The coating of the presently claimed invention has the following characteristics: it acts as a barrier to oxygen; it matches the mechanical, chemical and thermal properties to the corresponding properties of the material of the container made of styrene and/or polyolefins, without changing them significantly; a layer thickness of the ready to use coating varies from 0.003  $\mu\text{m}$  to 0.03  $\mu\text{m}$ , preferably 0.007  $\mu\text{m}$  to 0.01  $\mu\text{m}$ .

Carlblom discloses a barrier coating comprising the reaction product of a polyamine (A) with a polyepoxide (B) at a ratio of active amine hydrogen in (A) to epoxy group in (B) of less than 1.5:1, wherein the polymer network of the barrier coating, when cured, has an amine nitrogen content of less than 7 percent by weight based on the total weight of the cured barrier coating,

wherein the polyamine (A) is an adduct of a polyamine monomer and a polyepoxide, and wherein the polyepoxide (B) comprises a specific structure shown in claim 1 of Carlblom, in which structure: R is phenylene or naphthylene; X is O or C(O)--O or combination thereof; n is 2-4; and m is 0-10, and wherein said polyamine monomer comprises an aminoalkylene polysubstituted aromatic compound in which at least 50 percent of the carbon atoms are aromatic and which includes no unsubstituted alkylene groups greater than two carbon atoms in length. Carlblom does not disclose a material suited for a coating as recited in the presently claimed invention.

At column 4, line 50 through column 5, line 11, Carlblom discloses a barrier coating. It is generally desired that the barrier characteristic is provided with a dry coating that is not more than 25.4  $\mu\text{m}$  thick, preferably about 12.7  $\mu\text{m}$  or less, in order to keep added costs for the barrier coating to the container down.

Column 4, lines 1-19 of Carlblom describe a packaging material which includes "at least one layer of a relatively gas-

permeable polymeric material and at least one layer of a polyamine-polyepoxide barrier coating as defined above... The barrier coating included in the packaging material may be applied to one or more surfaces of the polymeric material, or it may be laminated between two layers of the polymeric material. Stock sheets are contemplated that may be used as wrappings or formed into containers or other articles. Alternatively, a container or other article may be formed from the polymeric material and the barrier coating of the present invention applied onto the surface of the formed article such as by spraying, roll coating, or other conventional method of coating. For these purposes, the barrier coating compositions of the present invention have the rheological characteristics of liquid coating compositions."

Claim 17 of Carlblom recites "a container comprising a body molded from a gas permeable polymeric material having coated thereon the coating of claim 1."

Carlblom further states beginning at column 9, line 66 that: "The present invention is further concerned with packaging materials and containers formed of a barrier material or

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packaging materials and containers including a barrier material. Such packaging materials and/or containers would be desired to have some or all of the following properties: (1) low oxygen permeability, e.g., for the protection of package contents such as food from external oxygen, (2) low carbon dioxide permeability, e.g., for the retention of carbon dioxide gas within a container, (3) good adhesion to gas-permeable polymeric materials used in forming multilayer packaging materials or multilayer containers, (4) resistance to substantial change in permeability under high humidity conditions, (5) good flexibility, (6) high impact resistance, (7) low processing and cure temperatures for use with heat-sensitive substrates, e.g., certain gas-permeable polymeric materials, (8) high gloss, and (9) good clarity."

The above mentioned properties thus relate not only to the coating material or the container material, but also to previously coated containers.

At column 10, beginning at line 18, Carlblom states: "In the packaging materials and containers of the present invention,

barrier materials formed from the coating compositions of the present invention may be used in combination with any polymeric material used in conventional packaging materials and containers, e.g., polyolefins such as polyethylene or polypropylene, polyesters such as poly(ethylene terephthalate), polycarbonates and the like. Many polymeric materials, such as, e.g., polyolefins and polycarbonates, are known to be very gas-permeable... The containers or packaging materials of this invention may also incorporate one or more other polymeric materials such as, e.g., polyvinylidene chloride, polyacrylonitrile, polystyrene, acrylonitrile-styrene copolymers, polyamides, polyfluorocarbons, and blends or other combinations of such materials."

From the above discussion it is apparent that Carlblom discloses a number of different barrier coatings, a number of different containers or packaging materials, as well as different manners of production (i.e. the placing or inserting of the barrier coatings on or in the container material). However, there is no disclosure of which barrier coatings are suited for which plastic container based on the existing mechanical, chemical and thermal characteristics, whereby a corresponding matching of the

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products to be held in the plastic container is also taken into consideration, as in the presently claimed invention.

A further distinction between the present invention and Carlblom is that in the present invention the coating layer has a thickness of 0.007 to 0.01  $\mu\text{m}$ , while Carlblom discloses a thickness of 12.7  $\mu\text{m}$ .

In view of these considerations it is respectfully submitted that the rejection of claims 1, 2, 5 and 7 under 35 U.S.C. 102(b) or, in the alternative, under 35 U.S.C. 103(a) over the above-discussed reference are overcome and should be withdrawn.

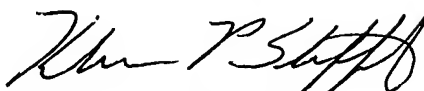
Reconsideration and allowance of the present application are respectfully requested.

Any additional fees or charges required at this time in connection with this application may be charged to Patent and Trademark Office Deposit Account No. 11-1835.

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Respectfully submitted,

By



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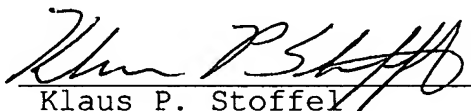
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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, PO Box 1450 Alexandria, VA 22313-1450, on September 9, 2008.

By:

  
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